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SCIENCE ADVISORY BOARD
Executive Committee Meeting
Public Conference Call in Room Ariel Rios 6013
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. Washington, DC
May 23, 2001

I. Attendees

Dr. William Glaze, Executive Committee (EC) Chair
Dr. Henry Anderson
Dr. Janet Johnson
Dr. Granger Morgan
Dr. William Smith
Dr. Rhodes Trussell

Dr. Glaze and Dr. Donald Barnes (Designated Federal Officer (DFO) for the EC) led and participated in the meeting from the Academy for Educational Development, 1825 Connecticut Ave. in Washington, DC, where they were attending as SAB/Agency workshop meeting. Mr. Robert Flaak, SAB Team Leader, attended to matters in Rm 6013.

Others who identified themselves on the phone were the following:

Sam Rondberg, DFO, Radiation Advisory Committee
Kathleen Conway, DFO, Environmental Engineering Committee
Mike Fuller -- UniTech Services Group
Glenn Roberts -- UniTech Services Group
Don Silverman -- UniTech Services Group

II. Agenda

The meeting proceeded in accord with the attached agenda (Attachment A).

III. Review Outputs from the Committees

A. *“Radiation in Sewage Sludge: Interagency Steering Committee on Radiation Standards (ISCORS) Dose Modeling Report - An SAB Advisory”*

Dr. Johnson, Radiation Advisory Committee (RAC) Chair, introduced the report. She noted that the SAB had been asked by Interagency Steering Committee on Radiation Standards

(ISCORS), through USEPA, to conduct a review of the guidance that would be provided to POTW operators. Upon seeing the state of the documentation, the RAC concluded that the material was insufficiently developed to be the subject of an SAB review report, *per se*. Therefore, they examined and commented on the material in the form of "an SAB Advisory". That is, the SAB treated the material as "a work in progress", rather than as a final product.

She went on to describe the three major elements of the Charge:

1. Is the dose modeling adequate?

The Committee "accepted" the model being used; i.e, RESRAD, which itself was the subject of an earlier RAC review. There are clearly limitations of the model that would be manifest in the context of this use. The RAC recommended, in part, benchmarking the RESRAD results against other models.

2. Are the scenarios reasonable?

In short the Committee answered affirmatively but went on to point out problems with parameter selection and certain aspects of the selected pathways that were studied. They also pointed out that the approach considers only the sludge as a means of exposure, when, in fact, there could be movement of radioactive material via the aqueous phase, as well. The RAC commented that the conservative assumptions made about the workers' exposure seem unrealistic.

c. Use of parameters and uncertainties?

The documentation was lacking to fully explore this matter.

It is not clear whether the report will come back to the RAC once it has been completed or not.

Mr. Michael Fuller of UniTech Services Group had submitted comments that had been circulated to the EC members (Attachment). He expressed appreciation at having the opportunity to participate, noting that their company had not been permitted to participate in the ISCORS process. He agreed that the ISCORS document was not mature, being still under development. Therefore, he urged that the SAB modify the language of its Advisory to be more explicit about the fact that the RAC had looked at the document before it was complete and that this SAB Advisory should not be interpreted as either a review or an approval of the final ISCORS document. He fears that some people might confuse SAB involvement during the development phase with its endorsement of the final product. He recommended some language, such as "This SAB Advisory does not constitute SAB approval of the final ISCORS report."

Dr. Johnson noted that the timing of the RAC involvement was not under RAC control.

Dr. Morgan recommended that the language in the Advisory dealing with limitations of RESRAD be highlighted more.

Dr. Trusell suggested that there be

- a. Some opening paragraph that sets the context for the RAC review; e.g., explain what an SAB Advisory is.
- b. An explicit statement about the RAC's willingness to review the final report once it has been sufficiently developed.

ACTION 1: The Executive Committee approved the Radiation Advisory Committee's
"Radiation in Sewage Sludge: Interagency Steering Committee on

Radiation Standards (ISCORS) Dose Modeling Report - An SAB Advisory", subject to edits described at the meeting. With these changes, the Advisory is ready for transmittal to the Administrator without further examination by the EC or vettors.

B. *"GENII Ver. 2: USEPA's Use and Adaptation of GENII Environmental Radiation Dosimetry System -- An SAB Advisory"*

Dr. Johnson introduced the RAC report and reviewed the main four Charge questions:

1. Is the FRAMES platform reasonable?

Yes, but there are limitations.

2. Are the modules adequate?

Yes, but more are needed.

3. Are the output, presentation, documentation, inter alia adequate?

Not really; even the most experienced modeler on the RAC Panel had trouble getting the model to run. There are glitches.

4. Is the uncertainty analysis reasonable?

It is a good attempt, but it is not adequate at this time.

She also noted the need for explicit training for users of the model so that it is applied correctly when used in different situations. Some RAC members were concerned about the perhaps over-conservative nature of the assumptions implicit in the model and that the model's inherent conservatism should be made more explicit. Also, there is a definite need to know just how, where, and why the model will be run in a given situation, if one is going to judge its overall adequacy.

Dr. Morgan urged that the Advisory be more explicit about Dr. Johnson last point. Further, he recommended highlighting the conservative nature of the model, noting that a decision-maker is often best served by a best estimate, along with a companion conservative estimate.

Dr. Trussell again recommended that there be an explanatory paragraph that describes the nature of the SAB's response; i.e., an Advisory.

Dr. Inyang was unable to participate in the call, but he had submitted comments (Attachment) which have been attended to his satisfaction (Attachment).

ACTION 2: The Executive Committee approved the Radiation Advisory Committee's *"GENII Ver. 2: USEPA's Use and Adaptation of GENII Environmental Radiation Dosimetry System -- An SAB Advisory"*, subject to final edits discussed at the meeting. With these changes, the Advisory is ready for transmittal to the Administrator without further examination by the EC or vettors.

IV. Updates

Mr. Rondberg reported that the re-draft of the dioxin report had been sent to the vettors for their consideration.

Dr. Morgan asked that his report on The Role of Science in Stakeholder Processes be considered at the July EC meeting, rather than trying to be addressed in a conference call. Dr. Barnes said that he would make those arrangements.

V. Adjournment

Dr. Glaze adjourned the meeting at 12:00 EST.

Respectfully Submitted,

Concurred,

Donald G. Barnes, Ph.D.
Designated Federal Official

William Glaze, Ph.D.
Chair, Executive Committee